

CLAIMS

1. A method of producing a heating element that is comprised essentially of molybdenum silicide type and alloys of this basic material, characterised by producing a material that contains substantially $\text{Mo}(\text{Si}_{1-x}\text{Al}_x)_2$ and Al_2O_3 by mixing a molybdenum aluminium silicide $\text{Mo}(\text{Si}_{1-y}\text{Al}_y)_2$ with SiO_2 , wherein the SiO_2 is at least 98% pure.
2. A method according to Claim 1, characterised in that the SiO_2 is present in silicates, such as mullite and sillimanite, which do not effect the symmetry of the crystal lattice of molybdenum silicide.
3. A method according to Claim 1 or 2, characterised in that x is caused to lie in the range of 0.4 - 0.6.
4. A method according to Claim 1 or 2, characterised in that x is caused to lie in the range of 0.45 - 0.55.
5. A method according to Claim 1, 2, 3 or 4, characterised by substituting molybdenum partly with Re or W in the material $\text{Mo}(\text{Si}_{1-x}\text{Al}_x)_2$.
6. An electrical heating element that is comprised substantially of the molybdenum silicide type and alloys of this basic material, characterised in that said element is comprised chiefly of the materials $\text{Mo}(\text{Si}_{1-x}\text{Al}_x)_2$ and Al_2O_3 , wherein SiO_2 having a purity of at least 98% is added during the production process.
7. A heating element according to Claim 5, characterised in that x lies in the range of 0.4 - 0.6.

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8. A heating element according to Claim 7, characterised in that x is caused to lie in the range of 0.45 - 0.55.

9. A heating element according to Claim 5, 6, 7 or 8, characterised in that molybdenum in the material $\text{Mo}(\text{Si}_{1-x}\text{Al}_x)_2$ is replaced partially with Re or W.